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## (54) PREPARATION OF BROMINATED POLYSTYRENE

### (57)Abstract:

**PURPOSE:** To attempt to improve appearance and color by brominating PS in an aliph. halogenated hydrocarbon as a solvent in the presence of a dehydrating agent using a specified amt. of a Lewis acid catalyst.

**CONSTITUTION:** A PS with an MW of 50,000-500,000 is dissolved in an aliph. halogenated hydrocarbon having a b.p. of 100°C or lower and containing 200ppm or less impurity such as water and/or an oxygen-contg. org. compd. such as a ketone, such as methylene chloride or ethylene chloride. 0.01-0.05mol of a dehydrating agent such as phosphorus pentaoxide based on one benzene ring and 0.001-0.03mol of a Lewis acid catalyst such as anhydrous AlCl<sub>3</sub> based on one benzene ring are added to the soln. and 101-103% Br<sub>2</sub> based on the substituting molar number is dropped therein at 0-40°C to complete the reaction. Then, HBr is expelled by blowing air therein. After the catalyst is deactivated by adding a small amt. of water, the reacted liq. is dropped in boiling water to crystallize. The solvent is recovered and the crystal is filtered and dried to obtain a white or granular brominated PS.

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